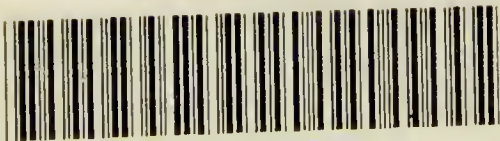


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GENERAL BOARD OF HEALTH.

MEDICAL COUNCIL.

REPORT

OF

THE MEDICAL COUNCIL

TO

THE RIGHT HON. SIR BENJAMIN HALL, BART., M.P.,

President of the General Board of Health, &c. &c. &c.,

IN RELATION TO

THE CHOLERA-EPIDEMIC OF 1854.

Presented to both Houses of Parliament by Command of Her Majesty.



LONDON:

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PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
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1855.

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GENERAL REPORT

OF

THE MEDICAL COUNCIL.

To the Right Hon. Sir BENJAMIN HALL, Bart., M.P.,
President of the General Board of Health.

SIR,

IN presenting our Report of inquiries conducted under your sanction into the course and phenomena of the late Epidemic of Cholera, the Medical Council may be allowed to express their satisfaction at Science having at length been recognised by the State as the ally of civil jurisprudence, and as the guide to a more enlightened code of medical police. They trust that this propitious movement may be regarded as the inauguration of a system ultimately destined to carry its ameliorating influence through all the ramifications of our sanitary institutions; and that the present fragmentary and imperfect application of medical knowledge in several departments of the State, may give place to a complete and comprehensive system, under the sole direction and control of one central department.

From the multifarious character of the objects embraced by this wide inquiry, it was found expedient to distribute them into several classes, and to entrust the examination of each class to a special section of the Council.

Of such special sections of the Medical Council, there were three: one, constituted to report on such *scientific inquiries* as it had seemed expedient to institute; a second, to digest from the general mass of contributed material whatever facts could illustrate the relative advantages of rival *methods of treatment*; a third, to invite from the cultivators of science in *foreign countries* any information which could be given as to the results of their kindred investigations.*

* The members of the three Committees were respectively as follows:

COMMITTEE FOR SCIENTIFIC INQUIRIES.—Dr. Arnott, Dr. Baly, Dr. Farr, Mr. Owen, Mr. Simon.

TREATMENT COMMITTEE.—Dr. Alderson, Dr. Babington, Dr. Paris, Dr. Tweedie, Mr. Ward.

COMMITTEE FOR FOREIGN CORRESPONDENCE.—Dr. Babington, Mr. Bacot, Sir James Clark, Mr. Lawrence.

As it was the paramount object of the Council to collect from members of their profession all the facts which medical observation and experience could afford; so was it their first duty to frame such a formula of instructions as might secure amplitude, accuracy, and technical uniformity in the returns they were thus desirous to obtain; and when we consider the crushing pressure under which our medical brethren laboured during the ravages of this fearful epidemic, too much praise cannot be accorded to them for the alacrity and goodwill with which they responded to the call.

In adverting to the results respectively obtained by the three Committees of their body, the Council must first express regret that their *Committee for Foreign Correspondence* have not been successful in their endeavours to elicit satisfactory information; but it may be justly pleaded that difficulties of no ordinary kind embarrassed all our inquiries, which no amount of zeal and diligence could overcome. It will be remembered that the Medical Council was not called into existence until the epidemic had already passed its culminating point: the way had not been sufficiently cleared by preliminary inquiries, and the prospective path of investigation had not been traced or enlightened by any scientific pioneers.

The Scientific Committee have collected some valuable information with regard to the past epidemics, and much more as a guide to future inquiry. This is more especially the case with respect to the impure condition of the London atmosphere, and its capability of influencing the intensity of an epidemic; to the foul state of the Thames, and its share in rendering the atmosphere impure; and to the farther intimate connexion between cholera and local sanitary defects. An inquiry still pending, but nearly completed, will, it is believed, show an equally close relation between the epidemic and the impurity of the water used as a beverage.

The various sources of atmospheric impurity are too well known to require enumeration, but there is one which, on account of its paramount importance, cannot be passed over without comment, viz., the present system of sewers. The Medical Council do not presume to judge of the merits of conflicting systems, or to decide which best fulfils certain theoretical conditions for the conveyance of a given volume of fluid; but they confidently assert that the existing sewers often fail in accomplishing their main object. Instead of carrying off almost inodorously the excrementitious and refuse matters

of the population, they evolve offensive effluvia, provoking general and grave complaint; and it is a fact worthy of remark, that the intensity of this nuisance is greatly aggravated in certain parts of the metropolis by obstructions to which their drainage is subject by reason of its outfall into a tidal river. The reckless disturbance of the contents of sewers, and their exposure on an extended surface, more especially pending an epidemic, is a practice which the Medical Council feel it necessary to reprobate.

The Scientific Committee lay great stress upon that source of impurity which results within dwellings from overcrowding the inhabitants, from defects of drainage, and from want of cleanliness and ventilation; and they deem it indispensable for the protection of the poor that the local authorities should vigilantly exercise the powers committed to them for preventing such evils. The good effects of sanitary improvements have been strikingly exemplified in the model lodging-houses, and in public baths and wash-houses. The establishment of burial-places beyond the boundaries of the metropolis is another circumstance of prime importance, and the relief thus afforded to overcrowded churchyards will, no doubt, be regarded by the future historian as one of the greatest improvements in the nineteenth century.

The Metropolis Local Management Bill, introduced by yourself, and already sanctioned by one branch of the Legislature, is a subject of sincere congratulation, since it promises efficient sanitary government for the metropolis; and it is to be devoutly hoped that similar measures, equally needed for the whole country, will speedily follow. All these considerations are forcibly pressed upon us by the probability that epidemics of cholera may be frequent, if they do not actually become persistent; as we are fearfully reminded that the interval between the epidemics of 1831-2 and that of 1848-9 was 17 years, whereas the late epidemic followed the second after an interval only of five years.

Nor are such measures to be regarded merely as safeguards against the invasion of cholera; they are equally applicable, and not less effective, against the spread of other epidemics, such as the varieties of continued fever and scarlatina, which have been lately stated by the College of Physicians to be far more destructive to human life than even the periodical scourge of cholera.

The Scientific Committee have taken pains to investigate the possible relations subsisting between the outbreaks of cholera and certain meteorological conditions. Mr. Glaisher's

elaborate report will be studied with great interest. If in a subject so obscured by inappreciable influences he has not succeeded in arriving at absolute demonstration, he has gone very far to establish high probabilities, which future observation may raise into certainties. And, here again let us remark, that his admirable system of observations could not be fully organized until the epidemic had already attained its climax. He has, however, shown, that during the three epidemics there has existed a great predominance of calm, rendering the season defective in those atmospheric changes which renew the purity of the air, and, at the same time, an undue height of the barometer, operating against vaporous diffusion; and further, a great excess in the temperature of the Thames at night, as compared with that of the superincumbent atmosphere, giving rise to nocturnal clouds of vapour, which are necessarily charged with impurities derived from the foul contents of the river. The great principle which was first laid down in Dr. Farr's Report to the Registrar General respecting the relative immunity enjoyed at particular altitudes may be connected with this new link of evidence. Mr. Glaisher has clearly shown that in the low-lying districts, wherein the epidemic assumed its highest malignity, the air was stagnant, and moisture, impregnated with impurities, was especially induced to hover.

Special examinations of the atmosphere were conducted by Dr. Thomson and Mr. Rainey, but their results possess little more than a negative interest, since they failed to discover any new or significant element of an organic or inorganic nature, as a possible agent in the causation of cholera.

The chemical and microscopical inquiries into the water-supply of houses and districts suffering from cholera have been investigated by Dr. Thomson and Dr. Hassall, and the results are embodied in the Report of the Scientific Committee; and as the period is now at hand when the water companies will be required to have their sources of supply amended, the Medical Council state that the facts before them show the necessity of a stringent enforcement of the provisions of the Metropolis Water Act, and of an inquiry as to how far these provisions are adequate to insure the purity and wholesomeness of the water supplied to the public. For the abolition of cesspools—in itself a sanitary advantage—has indirectly led to another evil. The excrements of the population are now to a great extent poured into the Thames; and, as might have been expected, our chemical and microscopical inquirers concur in stating that traces of this abominable

filth are found by them in the drinking-water supplied to a large part of the population.

The extraordinary irruption of cholera in the Soho district which was carefully examined by Mr. Fraser, Mr. Hughes, and Mr. Ludlow, does not appear to afford any exception to generalizations respecting local states of uncleanness, overcrowding, and imperfect ventilation. The suddenness of the outbreak, its immediate climax, and short duration, all point to some atmospheric or other widely-diffused agent still to be discovered, and forbid the assumption, in this instance, of any communication of the disease from person to person, either by infection or by contamination of water with the excretions of the sick.

In undertaking the pathology of the disease the Committee for Scientific Inquiries laboured under the disadvantage to which we have frequently adverted—the delay of all inquiry until the epidemic had already passed a climax; for, as they justly remark, “in order to obtain large results, it is most desirable that such inquiry should be commenced at an early period of the epidemic, and that, moreover, it should to some extent be continued in the absence of the disease which they aim at elucidating.” Forms of instruction were, however, as speedily as possible prepared for circulation in order to obtain returns as to the stages of the disease, its duration, fatality, and relative frequency. A considerable amount of information was thus collected, and will be found embodied in a tabular form.

The duties of the *Treatment Committee* consisted, in the first place, in the invention of a mode by which the individual experience of practitioners might be brought under one comprehensive view, and thus has the science of statistics, for the first time, been applied on a large scale to medical treatment. The degree of faith which may be accorded to the inferences deduced by this method has been evidenced by the corroborative results of several separate sets of returns, or various materials separately worked, which have displayed corresponding results. The difficulty of devising a mode of extracting statistical facts from voluminous returns sufficiently shows that the work ought only to be considered as in the progress of development; and the same consideration justifies a belief that the farther prosecution of the inquiry, aided by the experience now gained, may carry it forward towards a far greater state of perfection, and elucidate truths of still greater value.

The facts elicited relate chiefly to the absolute inutility or relative inefficiency of certain classes of medicines and measures, thus clearing away valueless modes of treatment and redeeming from idle waste the few short and hurried, but precious, moments during which succour may be available, and securing that brief interval for the use of more promising means, or for others which are yet fairly open for judicious experiment.

There is one feature in this inquiry to which the Treatment Committee direct particular attention. It appeared to them that a most interesting line of investigation, promising valuable and instructive practical results, was opened by tracing the success of certain modes of treatment under which, according to their analysis of the evidence, the stage of collapse was avoided, and the far less dangerous alternative of consecutive fever was accepted.

It is much to be desired that a more extended body of evidence should be accumulated on this important topic, to which a scrupulously careful analysis should be applied. The prospect of discovering truths of high practical importance by this investigation is enhanced by the statement of certain corroborative facts enunciated in the Report of the Scientific Committee.

Statistical Tables are appended to the Report of the Scientific Committee, to which the Council desire to direct especial attention, as they exhibit a compendious summary of the extent of the epidemic, its duration, its comparative mortality in different districts, and at different ages.

In concluding our Report, and thus bringing the duties of the Medical Council to a termination, we most earnestly, but respectfully, urge upon the Government the paramount importance of pursuing with unabated diligence that path of investigation which Science sanctions, and into which the circumstances of the late epidemics had directed and guided us.

That which has been so repeatedly and wisely urged regarding the removal of accumulating filth, and the correction of nuisances, during intervals comparatively free from disease, may be pleaded with equal truth as to the necessity of an uninterrupted continuance of scientific inquiries during the same seasons of immunity, from which alone can we reasonably expect to obtain the requisite data for a true theory of the causes, or a wise plan for the cure of any future epidemic.

From regarding the future necessity for continued and competent investigation, the Council gratefully recur to the assistance they have received under your presidency. The members cannot separate without recording the deep sense they entertain of the kindness and courteous attention with which, on all occasions, you have been pleased to accept their suggestions ; nor can they refrain from expressing their regret that political changes are removing you from an office with which your name will remain identified, and from the administration of laws which you have given so much pains to establish.

JOHN AYRTON PARIS,
Chairman.

General Board of Health,
July 26, 1855.

LONDON:

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Printers to the Queen's most Excellent Majesty.

For Her Majesty's Stationery Office.

R E P O R T

ON THE

RESULTS OF THE DIFFERENT METHODS
OF TREATMENT

PURSUED IN

EPIDEMIC CHOLERA.

ADDRESSED TO

THE PRESIDENT OF THE GENERAL BOARD OF HEALTH

BY THE

TREATMENT COMMITTEE OF THE MEDICAL COUNCIL.

Presented to both Houses of Parliament by Command of Her Majesty.



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1855.

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THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

RESEARCH REPORT

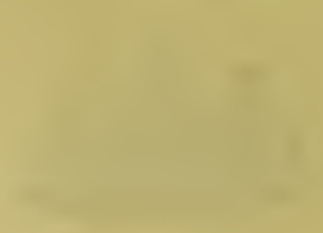
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THEORY OF THE ELECTRIC FIELD

BY J. D. VAN VLEET

Submitted to the Faculty of the Divinity School

in partial fulfillment of the requirements for the degree of Doctor of Philosophy



REPORT.

IN drawing up the present Report the "Committee on Treatment" have thought it right neither to depart from, nor to exceed, the strict limits of the duty assigned to them by the General Board of Health.

However they might feel disposed to offer their carefully digested opinion through a medium so authentic, they do not forget that the object of their labour is simply the commencement of a system of national medical statistics—a system which is intended to produce not opinions, but materials on which philosophical deductions are hereafter to be based.

They propose, therefore, to restrict their work to an analysis of the records placed before them, and to an arrangement of the results of that analysis, concluding with such deductions only as are plain and unequivocal.

The Committee have to report that the application made by the Board of Health to the various metropolitan hospitals, and to medical practitioners, requesting returns of cholera cases, with details of the circumstances, treatment, and issue, has been answered by the filled-up records of 2749 cases, all of which have been transmitted for their examination.

By means of a most careful but difficult classification, these 2749 cases have been arranged under various heads, and the treatment analysed, and its issue reduced to averages.

The Committee have proceeded to compare the results of different modes of treatment obtained by this analysis of the tabulated records, and they have added such inductive reasoning from these results as appear to bear practically on the mode of meeting any future visitation.

The cases are arranged in three classes.

1st. Those which have occurred in metropolitan hospitals, amounting to 1104.

2d. Those which have occurred in the metropolitan districts (not in hospitals), amounting to 1645.

3d. Those which have occurred in the provincial districts.

These classes have been subdivided according to the most

prominent character of the treatment pursued, and the cases are arranged under the four heads—

1. Alterative.
2. Astringent.
3. Stimulant.
4. Eliminant.

Of the whole 2749 cases, there have been, in metropolitan hospitals,

689 treated by Alteratives.
 231 " Astringents.
 84 " Stimulants.
 100 " Eliminants.

In the metropolitan districts (not in hospitals), there have been

977 treated by Alteratives.
 426 " Astringents.
 196 " Stimulants.
 46 " Eliminants.

Of the 689 cases treated by Alteratives in metropolitan hospitals, it is shown by a careful analysis of the tabulated records, that—

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 52 cases calomel was given in small doses frequently repeated - - -	34	8	26	50	76.1
in 16 with emetics.* - - -					
15 salines.					
27 external stimulants.					
40 ice water.					
23 hot baths.					
In 381 cases calomel was given, larger doses, at longer intervals - - -	324	94	184	48.2	56.7
in 205 with salines.					
165 emetics.					
135 external stimulants.					
43 ice water.					
24 castor oil (small doses).					
107 hot water baths.					
100 turpentine glysters.					
In 105 cases calomel, with opium, was given -	70	22	44	41.9	62.8
in 63 with salines.					
4 emetics.					
9 external stimulants.					
30 { internal stimulants.					
hot water baths.					
ice water.					
castor oil.					

* It will be understood that in this and the following tables more than one of the accessory remedies were given in some of the cases.

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Deaths in Collapse Cases.
In 20 cases other preparations of mercury were given	14	3	13	65·	92·8
in 5 with salines.					
14 external stimulants.					
14 ice water.					
3 internal stimulants.					
9 solution of soda.					
9 hot baths.					
In 131 cases salines were given - - -	103	25	66	50·3	64·
in 96 with emetics.					
96 hot water baths.					
96 external stimulants.					
15 ice water.					
1 injection into the veins.					

Of the 231 cases treated by Astringents in metropolitan hospitals, it appears that—

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 170 cases sulphuric acid was given - -	123	27	98	57·6	79·6
in 141 with emetics.					
8 calomel.					
5 opium.					
35 external stimulants.					
121 internal stimulants.					
11 ice water.					
28 hot baths.					
In 36 cases chalk and opium were given - -	17	10	11	30·5	64·7
in 8 with calomel.					
9 internal stimulants.					
9 external stimulants.					
9 hot baths.					
14 ice water.					
In 9 cases iron alum and alum mixture were given	3	1	4	44·4	—
In 9 cases acetate of lead with opium were given -	6	2	5	55·5	—
in 5 with emetics.					
8 salines.					
9 external stimulants.					
9 hot baths.					
8 ice water.					
In 6 cases cinchona and quinine were given -	2	1	—	—	—
In 1 case gallic acid, stimulants, hot bath, and ice water - - -	1	1	1	—	—

Of 84 cases treated by Stimulants in metropolitan hospitals, it appears that—

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 8 cases ammonia was given - - - -	7	1	6	—	—
in 6 with emetics.					
4 calomel.					
8 brandy.					
2 turpentine enema.					
In 39 cases brandy was given, with hot baths and ice water - - - -	38	16	25	64·1	—
In 4 cases ether was given - - - -	3	1	3	—	—
in 1 with emetic.					
3 brandy.					
2 opium.					
2 nitrous oxyde.					
2 hot baths.					
In 3 cases camphor and chloroform were given, with external stimulants, and emetics, hot baths - - -	1	—	—	—	—
In 5 cases "cordial tonic mixture" was given -	4	1	3	—	—
In 7 cases cajeput oil was given, with emetics, salines, and external stimulants (turpentine) - - -	7	3	4	—	—
In 18 cases emetics, external stimulants, hot baths, and ice water - - -	6	1	6	—	—
	66	23	47	55·9	71·2

Of 100 cases treated by Eliminants in metropolitan hospitals, it appears that—

	Collapse Cases.	Consecutive Fever.	Death.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 78 cases castor oil was given - - -	74	13	59	75·6	9·7
in 48 with emetics.					
34 external stimulants and hot baths.					
15 capsicum, ginger, &c.					
11 calomel.					
2 ice water,					
2 turpentine.					
In 21 cases emetics were given - - -	21	1	17	80·9	—
in 3 with ipecacuanha, in small doses.					
10 potass. tartr. of antimony.					
21 ice water.					
In 1 case olive oil was given - - -	—	—	—	—	—

Of 977 cases treated by Alteratives in the metropolitan districts (not in hospitals), the analysis of the tabulated records shows that—

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 532 cases calomel was given in small doses, frequently repeated - - -	338	72	249	46·8	73·6
in 270 with salines.					
98 emetics.					
62 opium.					
44 internal stimulants.					
34 external stimulants.					
21 chloric ether.					
19 solution of soda.					
In 201 cases calomel was given in larger doses, longer intervals - - -	104	25	77	38·3	74·
in 102 with salines.					
27 chalk and opium.					
47 chloric ether.					
52 mineral acids.					
74 external stimulants.					
5 hot air baths.					
In 196 cases calomel, with opium, was given - - -	114	24	65	33·1	57·
in 120 with salines.					
39 chloric ether.					
5 soda solution.					
17 external stimulants.					
8 internal stimulants.					
4 ice water.					
In 13 cases other preparations of mercury were given	6	2	8	—	—
in 5 with salines.					
7 opium.					
In 35 cases salines were given - - -	21	9	12	34·2	57·1
in 9 with soda solution.					
11 opium.					
5 emetics.					
1 chloric ether.					
6 external stimulants.					
2 injection into the veins.					

Of 426 cases treated by Astringents in the metropolitan districts (not in hospitals) it appears that—

				Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 238 cases sulphuric acid was given	-	-		119	24	93	39'	78' 1
in 92 with opium.								
22 calomel.								
4 catechu.								
18 cinchona.								
5 gallic acid.								
6 emetics.								
40 external stimulants.								
29 internal stimulants.								
61 ice water.								
In 57 cases chalk mixture was given	-	-		20	4	13	22' 8	65'
in 32 with opium.								
12 calomel.								
11 catechu.								
In 59 cases chalk and opium were given	-	-		12	2	7	11' 8	58' 3
in 8 with emetics.								
9 cinchona.								
28 catechu.								
5 calomel.								
In 37 cases acetate of lead was given	-	-		29	11	18	48' 6	62'
in 30 with opium.								
13 calomel								
5 castor oil.								
4 chalk mixture.								
In 3 cases tincture of the sesquichloride of iron	-	-		3	1	5	—	—
was given								
in 2 with calomel.								
1 opium.								
In 2 cases catechu was given	-	-		—	—	—	—	—
24 " opium	-	-		8	9	5	—	—
2 " extract of logwood	-	-		1	—	—	—	—
1 " sugar	-	-		—	—	1	—	—
2 " gallic acid	-	-		—	—	—	—	—

Of 196 cases treated by Stimulants in the metropolitan districts (not in hospitals) it appears that—

				Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 94 cases ammonia was given	-	-		73	16	55	58' 5	75' 3
in 4 with emetics.								
52 ether.								
5 chloroform.								
20 calomel.								
14 opium.								
9 camphor.								
5 salines.								
25 external stimulants.								
10 brandy, &c.								

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 25 cases ether was given - - -	24	3	20	80·	83·3
in 1 with chloroform.					
15 opium.					
4 camphor.					
6 capsicum.					
4 external stimulants.					
2 brandy, &c.					
In 31 brandy, &c. was given - - -	23	2	12	38·7	52·1
in 6 with emetics.					
6 calomel.					
12 opium.					
1 nitrous oxyde.					
1 internal stimulants.					
1 capsicum.					
In 23 chloroform was given - - -	17	4	13	56·5	76·4
in 13 with opium.					
6 external stimulants.					
7 camphor.					
3 capsicum.					
4 creosote.					
1 turpentine enema.					
In 2 creosote with calomel and opium was given -	—	—	—	—	—
2 capsicum with calomel and opium -	1	—	1	—	—
19 camphor - - -	5	—	5	—	—
in 1 with chloric ether.					
1 opium.					
1 camphor.					
10 capsicum.					

Of 46 cases treated by Eliminants in the metropolitan districts (not in hospitals) it appears that—

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 46 castor oil was given - - -	38	5	30	65·2	78·9
in 24 with calomel.					
4 opium.					
1 croton oil.					
2 other aperients.					
5 salines.					
4 emetics.					
7 internal stimulants.					
3 ice water.					

For the purpose of facilitating comparison, Tables are appended in which the results of the prominent treatment are brought into view by the omission of accessory remedies.

Of 1,104 cases treated in metropolitan hospitals—

689 cases were treated by alteratives,

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 52 calomel was given, small doses	34	8	26	50·	76·1
381 calomel, larger doses	324	94	184	48·2	56·7
105 calomel and opium	70	22	44	41·9	62·8
20 other preparations of mercury	14	3	13	65·	92·8
131 salines	103	25	66	50·3	64·

231 cases were treated by astringents,

In 170 sulphuric acid was given	123	27	98	57·6	79·6
36 chalk and opium	17	10	11	30·5	64·7
9 iron alum, and alum mixture	3	1	4	44·4	—
9 acetate of lead and opium	6	2	5	55·5	—
6 cinchona and quinine	2	1	—	—	—
1 gallic acid	1	1	1	—	—

84 cases were treated by stimulants,

In 8 ammonia was given	7	1	6	—	—
39 brandy, &c.	38	16	25	64·1	—
4 ether	3	1	3	—	—
3 camphor and chloroform	1	—	—	—	—
5 cordial tonic mixture	4	1	3	—	—
7 cajeput oil	7	3	4	—	—
18 internal stimulants	6	1	6	—	—

100 cases were treated by eliminants,

In 78 castor oil was given	74	13	57	73·	77·
21 emetics	21	1	17	80·9	80·9
1 olive oil	—	—	—	—	—

Of 1,645 cases treated in the metropolitan districts (not in hospitals)—

977 cases were treated by alteratives,

	Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
In 532 calomel, small doses, was given -	338	72	249	46·8	73·6
201 calomel, larger doses -	104	25	77	38·3	74·
196 calomel with opium -	114	24	65	33·1	57·
13 other preparations of mercury -	6	2	3	—	—
35 salines -	21	9	12	34·2	57·1

426 cases were treated by astringents,

In 238 sulphuric acid was given -	119	24	93	39·	78·1
116 chalk and opium -	32	6	20	17·2	62·5
27 acetate of lead and opium -	29	11	18	48·6	62·
3 tincture of the sesquichloride of iron -	3	1	1	—	—
2 catechu -	—	—	—	—	—
24 opium -	8	9	5	—	—
2 extract of logwood -	1	—	—	—	—
1 sugar -	—	—	1	—	—
2 gallic acid -	—	—	—	—	—

196 cases were treated by stimulants,

In 94 ammonia was given -	73	16	55	58·5	75·3
24 ether -	24	3	20	83·3	83·3
31 brandy, &c. -	23	2	12	38·7	52·1
23 chloroform -	17	4	13	56·4	76·4
2 ercosote -	1	—	1	—	—
19 camphor -	5	—	5	—	—

46 cases were treated by eliminants,

In 46 castor oil was given -	38	5	30	65·2	78·9
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The following Table, a combination of the two preceding shows the General Per-centages of the various modes of Treatment.

		Collapse Cases.	Consecutive Fever.	Deaths.	Per Cent. of Deaths.	Per Cent. of Collapse Cases.
ALTERATIVES.						
In 584 cases	calomel was given, small doses	372	80	275	47'	73'9
582 "	calomel, larger doses	428	99	261	44'8	60'9
301 "	calomel and opium	184	46	109	36'2	59'2
33 "	other preparations of mercury	20	5	16	48'5	80'
166 "	salines	124	34	78	46'9	62'9
ASTRINGENTS.						
In 408 cases	sulphuric acid was given	242	51	191	46'8	78'9
152 "	chalk and opium, and chalk mixture with catechu	49	16	31	20'3	63'2
46 "	acetate of lead and opium	35	13	23	50'	65'7
24 "	opium	8	9	5	—	—
9 "	iron alum, and alum mixture	3	1	4	—	—
6 "	cinchona and quinine	2	1	—	—	—
3 "	sesquichloride of iron	3	1	1	—	—
2 "	extract of logwood	1	—	—	—	—
3 "	gallic acid	1	1	1	—	—
1 "	sugar	—	—	1	—	—
2 "	catechu	—	—	—	—	—
STIMULANTS.						
In 102 cases	ammonia was given	80	17	61	59'8	76'2
29 "	ether	27	4	23	79'3	—
70 "	brandy, &c.	61	18	37	52'8	—
26 "	chloroform, &c.	18	4	13	50'	—
5 "	cordial tonic mixture	4	1	3	—	—
19 "	camphor	5	—	5	—	—
7 "	cajeput oil	7	3	4	—	—
18 "	internal stimulants	6	1	6	—	—
2 "	croscote	—	—	—	—	—
2 "	capsicum	1	—	1	—	—
ELIMINANTS.						
In 124 cases	castor oil was given	112	18	87	70'1	77'6
21 "	emetics	21	1	17	80'9	—
1 "	olive oil	—	—	—	—	—

The evidence of these tables condemns the eliminant treatment altogether as a principle of practice.

It testifies against the stimulant principle, excepting as a resource in extreme cases.

It displays a decided advantage in the alterative principle, especially as carried out by calomel and opium; and it shows a still superior advantage in the astringent principle as applied through the means of chalk and opium—the general per-centage of deaths following each plan of treatment being,

Of Eliminants	-	-	-	-	71·7 per cent.
Stimulants	-	-	-	-	54· ,,
Alteratives, calomel and opium	-				36·2 ,,
Astringents, chalk and opium	-				20·3 ,,

In order to judge correctly of the value of this evidence, it is necessary to examine, as far as may be possible, the degree of severity of the cases brought beneath this test. The only means at our command (on the present occasion at least) to make this examination is to consider the relative proportion which the cases of collapse bear to the number of deaths of their own classes respectively. Examining, therefore, the collapse cases with the number of deaths, we find that calomel and opium stands highest in the scale of success, and the order of preference appears as follows:

Calomel and opium	-	59·2 per cent.
Calomel (larger doses)	-	60·9
Salines	- - -	62·9
Chalk and opium	-	63·2
Calomel (small doses)	-	73·9
Castor oil	-	77·6
Sulphuric acid	-	78·9

According to this result the superior success of calomel and opium in severer cases appears as a distinct fact, elicited by the present inquiry. It is accompanied by other facts, viz., the relative advantages of those other modes of treatment which follow in their order of success. This order marks the use of calomel in small doses, of castor oil, and of sulphuric acid, as actually to be deprecated in severe cases.

Chalk and opium, as shown above, stands at the head of the list in the general per-centages both in hospitals and in private practice, but in the comparison of the collapse cases with the number of deaths the average declines to the 4th rank.

In the hospital returns, though the cases of collapse are

much fewer, those of consecutive fever exceed the general average under this form of astringent. The deductions which might be made from these facts would be more valuable were a greater number of cases recorded. From the present limited amount the Committee are not disposed to generalize, but to reserve the evidence for comparison with future returns. It may, however, be briefly suggested that an obvious method of accounting for the discrepancy between the success of this form of astringent remedy, in the general and in the severer cases, would be to use the further testimony of the excess of consecutive fever in the severer cases; the inference would consequently remain that this treatment had checked the passage to the collapse stage, and increased the number of cases which survived to pass into that of fever.

It is apparent, from the returns, that the success of various modes of treatment in the hospitals follows the same ratio as those in private practice. As far as it goes, this is a valuable and interesting testimony that there is something real in the result arrived at.

Another rule obtains, showing throughout a greater mortality in hospital than in private practice.

Many reasons may be adduced for this excess. The cases in hospitals are almost always severe; they must all have undergone the process of removal, by which the patient is placed in the most unfavourable position of the body for a period, which, however short, bears a large proportion to the whole duration of the attack. They are at the same time exposed to loss of vital warmth, which tends to induce collapse. These incidents might be considered sufficient to counterbalance the relief from bad air, bad accommodation, and want of nursing in the dwellings of the poor. On the other hand, a large number of the private cases occur amongst the affluent or in the middle classes, amongst whom the disease is seldom left to its severer stages before treatment is had recourse to. That the favourable results should, in the aggregate, preponderate in private practice is therefore to be easily accounted for.

It is not to be doubted, besides, that the records of private cases are highly anomalous, and that the want of precision in the use of terms describing the various stages of the disease hinders, to say the least, the authenticity of the deductions from this class of returns. The mode of registration, as lately instituted in most hospitals, ensures a certain degree of uniformity; and for the present, at least, it

is obvious that these returns are the most reliable sources of information within reach.

It is no matter of surprise that these reports display no very decided relative per-centage of cures under any particular modes of treatment, because such a per-centage would have run counter to the experience of every practitioner, viz., that the disease is, for the most part, unmanageable in its severer forms and in the more advanced stages. But a certain advantage in any one plan of treatment, traced throughout the tables, is a fact as comprehensive as it is tangible, and one which will be received with greater confidence because it has no unreasonable pretensions; a fact which may safely be regarded as a real instalment of practical knowledge.

Although it is difficult, where several remedies have been employed, either simultaneously or in succession, to show the respective influence of each, yet some knowledge of the value of particular measures may be proximately arrived at by taking a large number of cases and reckoning the results of those in which they have and those in which they have not been used; such, for instance, as emetics, turpentine enemata, or ice water.

In 1,100 cases in metropolitan hospitals,

643 had emetics at the outset;

of these, 410 had collapse,

140 had consecutive fever, and

344 died;

or, 53·4 per cent.

or, of collapse cases, 83·9 per cent.

457 cases were treated without emetics;

of which, 303 had collapse,

106 had consecutive fever, and

226 died;

or, 49·4 per cent.

or, of collapse cases, 74·6 per cent.

It appears that out of 1,100 cases, there are

102 which, together with various other treatment, had turpentine enemata administered;

of these, 87 had collapse,

59 died;

or, 57·8 per cent.

or, of collapse cases, 67·8 per cent.

998 were treated without turpentine enemata,

626 had collapse,

511 died;

or, 51·2 per cent.

or, of collapse cases, 81·6 per cent.

It appears that out of 1,100 cases, there are,

496 in which, together with various other treatment,
ice water was given;

of these, 404 had collapse,

248 died;

or, 50· per cent.

or, of collapse cases, 61·1 per cent.

604 cases in which ice water was not given;

of these 309 had collapse,

322 died;

or, 53·3 per cent., and more
than the number of
collapse cases.

Before concluding these observations on the returns which record treatment in the several stages of cholera and collapse, it is impossible not to express regret that medical practitioners are not more agreed in the accurate use of the terms to be employed in statistical returns, a defect which has hitherto impaired the accuracy of the documents and the certainty of the inferences.

Of all the essential aids to the success of statistical inquiry, none is so important as a careful revision of the nomenclature, together with a scrupulous accuracy in the use of terms when defined; and at a future visitation, practitioners, in recording their cases, will perceive the importance of aiming at a higher object than the advocacy of any peculiar plan of treatment.

According to the filling up of the present returns, no definite information can be obtained on the subject of "Consecutive Fever," because the duration of the attack exceeding so much that of the acute stage, it is impossible to ascertain at what period of the fever the various remedies have been administered, or whether they have been used successively or simultaneously; all that can be recorded from the evidence is, that of 272 cases of consecutive fever, rather more than two thirds had salines, one fifth had calomel, and eleven were treated by nourishment alone.

Local depletion was used only six times, general depletion only twice, and counter irritants (blisters) in twelve cases. One fifth part of the number had tonics.

The amount of deaths is 73, or 26·8 per cent. Fifty-four cases are reported to have gone into consecutive fever without having been in collapse.

In the metropolitan districts, (not in hospitals,) 296 cases of consecutive fever are reported, rather less than two thirds of which had salines; one tenth had calomel; twenty-three were treated by nourishment alone; one tenth had tonics; one ninth had stimulants.

The amount of deaths is 92, or 31· per cent. Ninety-four cases are reported to have gone into consecutive fever without having been in collapse.

It is obvious that no particular use can be made of the above statements; a defect which need be the less deplored, since cholera, in the form of consecutive fever, becomes analogous to other fevers, the treatment of which is generally understood, or at least is an important branch of continued study in the profession. It is a disease the management of which requires daily, almost hourly, vigilance and attention to symptoms as they arise, as well as an unremitting application of judgment to each particular case.

The average of deaths exceeds by something more than 5 per cent. that of the deaths in typhoid fever.

The Committee have to report, with deep regret, that the returns are almost silent on the topic of "Simple and choleraic diarrhœa passing into cholera."

Of 1,104 cases treated in metropolitan hospitals, from which the evidence of treatment in the stages of choleraic and collapse has been extracted, the information regarding the stages of "Simple and choleraic diarrhœa passing into cholera" is extremely faulty.

Of 1,008 cases, it is wholly unknown whether they were treated or not in the stage of simple diarrhœa:

73 were known not to have had any treatment in that stage;

23 only were treated by medicine in that stage.

Of 1,005 cases, it is wholly unknown whether they were treated or not in the stage of choleraic diarrhœa:

48 were known not to have been treated in that stage;

51 only were treated by medicine in that stage.

In 123 cases the stages of "Simple and choleraic diarrhœa" are reported as "absent."

The treatment of the small number of cases recorded is as follows:—

The following table gives the results of 51 cases of “Simple and choleraic diarrhoea passing into cholera,” 23 of whom were treated in the stage of simple diarrhoea; and 51 in that of “Choleraic diarrhoea passing into cholera,” in metropolitan hospitals.

22 cases were treated in both stages:

in 4 calomel and opium were given (large doses) throughout both stages;

8 sulphuric acid through both stages, in 1 with chloric ether,

2 with opium and aperients;

3 chalk mixture through both stages;

1 chalk mixture in the 1st stage, calomel and opium and external stimulants in the 2d stage;

2 chalk and opium in the 1st stage, and calomel and opium (large doses) in the 2d stage;

1 iron alum through both stages;

3 castor oil through both stages;

1 salines and opium in the 1st stage only.

Of 28 cases treated in the second stage, only

in 13 calomel and opium were given (large doses),

in 1 with catechu;

1 salines;

6 sulphuric acid;

3 chalk mixture;

4 castor oil;

1 aperients and opium.

The returns of cases of “Simple and choleraic diarrhoea passing into cholera,” in the metropolitan districts, (not in hospitals,) give 3,638 cases.

Of 3104 cases, it is wholly unknown whether they were treated in the premonitory stages of the disease.

239 it is known that no medical aid was given in either of the stages of diarrhoea.

In 35 cases, the stages of “Simple and choleraic diarrhoea” are reported as “absent.”

184 cases were treated through both stages, viz., “Simple and choleraic diarrhoea.”

137 cases were treated in the stage of choleraic diarrhoea only.

The treatment of the cases recorded is as follows :—

Of 184 cases in both the stages of “ Simple and choleraic diarrhœa passing into cholera,” it appears that

Alteratives.

- In 25 cases calomel was given ;
 - in 1 with aperients ;
 - 1 emetics.
- In 13 cases salines were given ;
 - in 7 with opium,
 - 1 calomel.
- In 6 cases sulphur and soda were given.

Astringents.

- In 44 cases sulphuric acid was given ;
 - in 15 with opium,
 - 4 calomel,
 - 2 catechu and kino,
 - 2 stimulants,
 - 1 aperients.
- In 18 cases chalk mixture was given ;
 - in 1 with calomel,
 - 5 catechu or kino,
 - 1 aromatic confection,
 - 1 aperients,
 - 1 stimulants.
- In 67 cases chalk with opium was given ;
 - in 8 with calomel,
 - 7 catechu or kino,
 - 2 aromatic confection,
 - 6 stimulants,
 - 2 external warmth.
- In 4 cases extract of logwood was given ;
 - in 1 with calomel,
 - 1 stimulants.

Stimulants.

- In 2 cases stimulants were given.

Eliminants.

- In 5 cases aperients were given.

In 137 cases of "Choleraic diarrhœa passing into cholera," treated in the metropolitan districts, not in hospitals, it appears that

Alteratives.

In 26 cases calomel was given ;

in 15 with opium,
 2 stimulants,
 7 aperients,
 1 emetics.

In 7 cases salines were given ;

in 1 with calomel,
 1 stimulants.

In 1 case sulphur and soda were given.

Astringents.

In 41 cases sulphuric acid was given ;

in 11 with opium,
 1 calomel,
 9 stimulants.

In 7 cases chalk mixture was given ;

in 4 with calomel,
 1 catechu or kino.

In 36 cases chalk with opium was given ;

in 8 with catechu or kino,
 2 calomel,
 3 aromatic confection,
 4 salines,
 1 aperients,
 4 stimulants.

In 1 case aromatic confection was given.

1 case catechu.

1 case extract of logwood.

Stimulants.

In 13 cases stimulants were given ;

in 3 with opium,
 6 catechu or kino,
 2 emetics.

Eliminants.

In 2 cases aperients were given.

1 case emetics.

Showing so far a relative failure of the various plans adopted to stay the disease in its earlier stages. The number of cases treated, however, is but small compared with the whole ;

consequently from these two tables by themselves no fair inference can be made as to the comparative success of different modes of treatment.

The reported facts upon the treatment of these early stages of the disease are therefore not sufficiently numerous or distinct to warrant any specific induction, yet it should be observed that this is the very point at which statistical returns are capable of displaying the most unequivocal as well as the most practically useful information. There are, without doubt, certain points which might be proved from full returns regarding the premonitory stages, and those facts would be most important in the management of the disease at any future visitation. They would especially serve to meet it at that early period of its course when it is definitely controllable by medicine.

Thus, for example, had the fact been shown by adequate statistics, that the majority of cases which have passed into cholera have been altogether without treatment in the earlier stages, then the value and necessity of prompt treatment would be entirely established.

Again, if any of the various modes of treatment could have been in like manner shown to be utterly inadequate to arrest the disease in its progress to the severer stages, then the disuse altogether of such modes would secure an early trial for a more approved treatment, and prevent the waste of irretrievable opportunity.

Inferences, as comprehensive as these, however desirable, must not be rested on the narrow basis of a few isolated returns. It is, therefore, earnestly to be hoped that this most important part of the statistics of cholera may receive the careful attention of the medical profession when they furnish returns on any future occasion.

It remains only to analyze the data from which may be ascertained what has been the treatment of all those cases of "Simple and choleraic diarrhœa," which have not passed into cholera.

The following table shows the cases treated in metropolitan hospitals. The number of cases is 504.

Alteratives.

In these cases

In 154 calomel was administered;

in 126 with opium,

2 astringents,

21 aperients,

2 salines,

3 stimulants, of which 1 died;

In 17 cases salines were given,
 in 2 with astringents,
 1 opium,
 3 aperients,
 5 mercury,
 3 stimulants,
 1 external irritants.

Astringents.

In 60 cases chalk mixture was given,
 in 54 with opium,
 21 aperients,
 2 astringents,
 2 salines,
 2 stimulants;
 in 118 cases sulphuric acid was given,
 in 4 with opium,
 36 external stimulants, of which 2 died.

Stimulants.

In 23 cases stimulants were given,
 in 2 with astringents,
 2 opium.

Eliminants.

In 132 cases aperients were given,
 in 1 with astringents,
 1 opium,
 1 external irritants.

The following statement shows the cases treated in metropolitan districts (not in hospitals).

The number of cases is 3,337.

In which

in 90 cases calomel was administered,
 in 16 with aromatic confection,
 1 catechu,
 21 logwood,
 1 tonics,
 13 aperients,
 18 salines;

in 427 cases calomel with opium was given,
 in 6 with aromatic confection,

18	catechu, &c.,
7	logwood,
8	acetate of lead,
68	aperients,
56	stimulants,
90	sulphuric acid,
99	salines;

in 122 cases salines were administered,
 in 51 with opium,

1	aromatic confection,
7	catechu,
11	aperients,
6	stimulants,
25	other preparations ;

in 318 cases chalk mixture was given,
 in 42 with calomel,

56	aromatic confection,
49	catechu, kino, &c.,
14	logwood,
12	aperients,
18	stimulants,
2	sulphuric acid,
1	salines,
63	other preparations ;

in 959 cases chalk with opium was administered,
 in 169 with calomel,

38	aromatic confection,
224	catechu,
7	logwood,
1	tonics,
22	aperients,
59	stimulants,
53	other preparations,
6	sulphuric acid,
7	salines;

in 142 cases aromatic confection was given,
 in 3 with catechu, kino, &c.;

in 18 cases logwood was administered,
 in 12 with aromatic confection ;

in 497 cases sulphuric acid was administered,

in 41 with calomel,

4 catechu,

16 tonics,

25 aperients,

67 stimulants,

4 salines,

2 other preparations;

in 265 cases sulphuric acid with opium was administered,

in 8 with calomel,

2 tonics,

2 aperients,

1 salines,

20 stimulants;

in 216 cases opium was administered,

in 10 with aromatic confection,

26 catechu,

6 logwood,

18 acetate of lead,

22 tonics,

68 aperients,

11 sulphuric acid,

15 other preparations;

in 205 cases stimulants were administered,

in 107 with opium,

35 calomel,

7 aromatic confection,

5 catechu,

7 logwood,

3 tonics,

6 aperients,

4 other preparations;

in 28 cases castor oil was administered,

in 17 with calomel,

3 opium,

1 catechu,

2 other preparations;

in 4 cases charcoal and oxide of zinc were given,

6 cases sulphate of copper and opium,

11 cases creosote was administered.

To the above cases, returned in detail according to the forms sent out, may be added the following, communicated

by different practitioners, stated by them only in the aggregate, with a general notice of the treatment.

The number of cases is 17,332.

Alteratives.

406 cases were treated with calomel,
188 - - - with calomel and opium.

Astringents.

916 cases were treated with chalk mixture,
833 of which had aromatic confection also;
8,247 cases were treated with chalk and opium,
in which 3,876 had calomel also administered,
2,500 ammonia and catechu,
1,029 other astringents;
6,454 cases were treated with sulphuric acid,
in which 2,912 had opium also,
1,532 calomel and opium;
1,122 cases were treated with opium alone.

In order to extract all practicable information from the foregoing statements, it will be useful to add all these cases (according to their classes of treatment respectively) to the cases of diarrhœa in the same hospitals and districts which have gone into cholera. Then by taking the per-centage of the cases which have passed into cholera compared with the whole number of diarrhœa cases in each class respectively, the relative proportion of failure of each class of treatment will appear.

TABLE of "Cases of Simple and Choleraic Diarrhoea" treated in Metropolitan Hospitals, and in Metropolitan Districts (not in Hospitals), which have *not* passed into Cholera, and also of Cases of Simple and Choleraic Diarrhoea which have passed into Cholera, together with the relative Per-centage of Failure to stay the Disease in its earlier Stages, under each Mode of Treatment.

TREATMENT.	Cases of Simple and Choleraic Diarrhoea which have not passed into Cholera.				Cases of Simple and Choleraic Diarrhoea which have passed into Cholera.		Total Cases of Diarrhoea.	Total of Failures to stay the Disease in its earlier Stages.	Per Cent. of Failure.	If the Deaths are included as Failures.		
	Treated in Metropolitan Hospitals.	Treated in Metropolitan Districts (not in Hospitals).		Deaths from Diarrhoea.	Treated in Metropolitan Hospitals.	Treated in Metropolitan Districts (not in Hospitals).						
		Detailed Cases.	Cases given in the aggregate.								In Hosp.	In Dists.
ALTERNATIVES :—												
Calomel - - -	23	90	406	—	—	13	524	13	2·4	—		
Calomel with opium - - -	126	427	188	—	3	38	741	55	6·9	7·1		
Salines - - -	17	122	—	—	—	20	139	22	13·6	—		
ASTRINGENTS :—												
Chalk Mixture - - -	6	318	—	—	9	25	324	32	8·9	12·6		
Chalk with opium, calomel, and astringents - - -	54	959	*5,747	—	16	103	6,760	105	1·5	1·7		
Chalk and aromatic confection - - -	—	—	916	—	—	—	916	—	—	—		
Chalk, opium, ammonia, and catechu - - -	—	—	2,500	—	—	5	2,500	5	0·2	—		
Aromatic confection - - -	—	142	—	—	1	—	142	—	—	—		
Sulphuric acid with and without opium and calomel - - -	118	497	6,454	2	13	85	7,069	99	1·3	1·5		
Sulphuric acid and opium - - -	—	565	—	—	1	—	265	—	—	0·3		
Opium - - -	—	216	1,122	—	36	—	1,338	—	—	2·6		
Other astringents - - -	—	21	—	—	†11	7	21	7	—	—		
STIMULANTS - - -	23	205	—	1	4	15	228	15	6·1	8·1		
ELIMINANTS - - -	132	28	—	—	—	8	160	8	4·7	—		

† Treatment not detailed.

* 3876 with calomel, 1029 with astringents.

† Treatment not detailed.

Thus the order of per-centage of failure to stay the disease in its earlier stages, or in that of premonitory diarrhœa, is as follows :—

	Per Cent.	Or, including the Deaths from Diarrhœa as Failures, per Cent.
Salines - - -	13·6	—
Chalk mixture - -	8·9	12·6
Calomel, with opium	6·9	7·1
Opium - - - -	—	2·6
Calomel - - - -	2·4	—
Chalk, with opium, calomel, and astringents - -	1·5	1·7
Sulphuric acid, with opium and calomel - -	1·3	1·5
Sulphuric acid, with opium -	—	0·3
*Chalk, with opium, ammonia, and catechu - -	0·2	—

Taking sulphuric acid, with and without opium, and with calomel as an adjunctive remedy - -	1·33	1·54
---	------	------

Taking chalk with and without opium, together with aromatic confection and ammonia, with catechu, kino, logwood, and calomel as an adjunctive remedy -	1·31	1·55
--	------	------

Showing a decided preference to the astringent plan of treatment in the early stages of the disease, or in the premonitory diarrhœa.

Although the facts gathered and digested during this investigation throw a most useful light on the comparative value of different modes of treatment, the Committee are of opinion that still more decisive evidence might be obtained under more favourable circumstances. The inquiry upon which they now report was not undertaken until the epidemic had already reached its culminating point, and when leisure for due pre-arrangement was wholly wanting. The work was partially impeded by the absence of experience in devising the most perfect method of drawing out the returns, and the answers have been less general than might have been expected, had the papers been sent out earlier and the

* A general return of cases in the aggregate—no details.

medical profession been more prepared to co-operate The Committee are therefore of opinion that much more might and would be effected by carrying out further the plan hitherto only partially successful.

They entertain a conviction, which has grown with the progress of the work, that by ensuring fuller and more numerous returns to a more complete and distinct form of inquiry, they would, on any future visitation of the disease, be enabled to collect ample store of available facts, and to deduce truths of the utmost importance both to guide medical practice and to enlighten science.

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